

Notice of Allowability

Application No.

10/649,870

Examiner

Travis R. Hunnings

Applicant(s)

HILL, BOBBY D.

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 8 August 2005.
2. ☒ The allowed claim(s) is/are 53-80.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 10/13/05 & 11/8/05
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tara Williams on 8 November 2005.

The application has been amended as follows: Cancel claims 1-52. Add the following new claims:

53. (New) An airborne element detection and evacuation system for a structure, comprising:

- a power receptacle interface that can be configured to change states;

- an airborne element sensor, capable of detecting the presence of a predetermined airborne element, the airborne element sensor having an output signal indicating the presence of the predetermined airborne element;

- a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus, the conduit system comprising a first valve and a second valve, the first valve being interposed between the interior of the structure and the second valve, the second valve being interposed between the first valve and the exhaust apparatus; and

- a booster apparatus within the conduit system, the booster apparatus being interposed between the interior of the structure and the exhaust apparatus, wherein upon the output signal indicating the presence of the predetermined airborne element, a state of the power receptacle

interface may be changed, the exhaust apparatus may be activated, the second valve may be activated, and the booster apparatus may be activated, whereby at least a portion of the airborne element may be removed from the structure via the conduit system.

54. (New) The airborne element detection and evacuation system of Claim 53, further comprising an alert system in communication with the airborne element detection and evacuation system, wherein the alert system comprises system alerts.

55. (New) The airborne element detection and evacuation system of Claim 54, wherein the system alerts are selected from the group consisting of visual, audible, and haptic alerts.

56. (New) The airborne element detection and evacuation system of Claim 54, wherein at least a portion of the alert system is integrated with the power receptacle interface.

57. (New) The airborne element detection and evacuation system of Claim 53, wherein the power receptacle interface includes visual and audible alerts.

58. (New) The airborne element detection and evacuation system of Claim 53, wherein the power receptacle interface is portable.

59. (New) The airborne element detection and evacuation system of Claim 53, further comprising a filter apparatus interposed between a discharge of the exhaust apparatus and an ambient atmosphere exit means, wherein prior to entering the atmosphere, the airborne element may be filtered through the filter apparatus.

60. (New) The airborne element detection and evacuation system of Claim 53, wherein the airborne element sensor is a smoke detector.

61. (New) The airborne element detection and evacuation system of Claim 60, further comprising a resettable sprinkler system in communication with the smoke detector, wherein upon detection of smoke, the sprinkler system may be activated.

62. (New) The airborne element detection and evacuation system of Claim 53, wherein the airborne element sensor is capable of detecting temperature.

63. (New) The airborne element detection and evacuation system of Claim 53, wherein the airborne element sensor is capable of detecting carbon monoxide.

64. (New) The airborne element detection and evacuation system of Claim 53, wherein the airborne element sensor is capable of detecting natural gas.

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65. (New) The airborne element detection and evacuation system of Claim 53, wherein the first valve is a passive valve and upon activation of the second valve, the second valve may be opened, whereby activation of the exhaust apparatus and the opening of the second valve causes a vacuum force within the conduit system sufficient to open the first valve.

66. (New) The airborne element detection and evacuation system of Claim 53, further comprising a control system in communication with the second valve, the airborne element sensor, and the exhaust apparatus, wherein the second valve, the airborne element sensor, the exhaust apparatus, and the control system communicate via an AS-I compliant communication bus.

67. (New) An airborne element detection and evacuation system for a structure, comprising:

- a power receptacle interface that can be configured to change states;

- an airborne element sensor, capable of detecting the presence of a predetermined airborne element, the airborne element sensor having an output signal indicating the presence of the predetermined airborne element;

- a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus;

- a plurality of zones within the structure, each zone having an interior, an airborne element sensor, a first valve, and a second valve, wherein each zone's first valve is interposed between the zone's interior and the zone's second valve, each zone's second valve being interposed between the first valve and the exhaust apparatus; and

- a booster apparatus within the conduit system, the booster apparatus being interposed between at least one zone's interior and the exhaust apparatus,

- a programmable control system in communication with the airborne element sensors, the second valves, and the airborne element evacuation system, wherein upon detection of a predetermined airborne element within one of the plurality of zones, that zone's second valve may be energized to open that zone's second valve, the state of the power receptacle interface may be changed, the exhaust apparatus may be actuated, and the booster apparatus may be activated, whereby at least a portion of the airborne element may be removed from the structure via the conduit system.

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68. (New) The airborne element detection and evacuation system of Claim 67, wherein opening of the zone's second valve causes the first valve of that zone to open.

69. (New) The airborne element detection and evacuation system of Claim 67, wherein opening of the zone's second valve causes the remaining zones' second valves to close sealing off the remaining zones' interiors from the conduit system.

70. (New) The airborne element detection and evacuation system of Claim 67, wherein the zone's first valve is passive and the actuation of the exhaust apparatus and the opening of the zone's second valve causes a vacuum force within the conduit system, causing the zone's first valve to open.

71. (New) The airborne element detection and evacuation system of Claim 67, wherein the plurality of second valves, the plurality of airborne element sensors, the exhaust apparatus, and the control system communicate via an AS-I compliant communication bus.

72. (New) The airborne element detection and evacuation system of Claim 67, further comprising an alert system in communication with the airborne element detection and evacuation system, the alert system comprising visual, audible, and haptic interface system alerts, wherein upon the output signal indicating the presence of the predetermined airborne element, the alert system actuates the visual, audible, and haptic interface system alerts.

73. (New) The airborne element detection and evacuation system of Claim 67, wherein the power receptacle interface includes visual and audible alerts.

74. (New) The airborne element detection and evacuation system of Claim 67, wherein the power receptacle interface is portable.

75. (New) A method for evacuating airborne elements from a structure, comprising:

detecting, via an airborne element sensor, the presence of a predetermined airborne element within a structure;

sending a signal to an airborne element evacuation system upon the detection of the predetermined airborne element, the airborne element evacuation system comprising a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus, wherein a first valve and a second valve is coupled to the conduit system, the first valve being interposed between the interior of the structure and the second valve, the second valve being interposed between the first valve and the exhaust apparatus, and a booster apparatus disposed within the conduit system,

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the booster apparatus being interposed between the interior of the structure and the exhaust apparatus;

changing the state of an outlet in a power receptacle interface upon the detection of the predetermined airborne element;

actuating the exhaust apparatus;

activating the booster apparatus; and

activating the second valve, whereby the second valve opens allowing at least a portion of the airborne element to be removed from the structure via the conduit system.

76. (New) The airborne element detection and evacuation system of Claim 75, wherein the first valve is passive and the actuation of the exhaust apparatus and the opening of the second valve causes a vacuum force within the conduit system, causing the first valve to open.

77. (New) The airborne element detection and evacuation system of Claim 75, further comprising controlling the airborne element detection and evacuation system via a control system in communication with the second valve, the airborne element sensor, and the exhaust apparatus, wherein the second valve, the airborne element sensor, the exhaust apparatus, and the control system communicate via an AS-I compliant communication bus.

78. (New) The airborne element detection and evacuation system of Claim 75, further comprising an alerting via an alert system in communication with the airborne element detection and evacuation system, the alert system comprising visual, audible, and haptic interface system alerts, wherein upon the output signal indicating the presence of the predetermined airborne element, the alert system actuates the visual, audible, and haptic interface system alerts.

79. (New) The airborne element detection and evacuation system of Claim 75, wherein the power receptacle interface includes visual and audible alerts.

80. (New) The airborne element detection and evacuation system of Claim 75, wherein the power receptacle interface is portable.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance: regarding independent claims 53, 67 and 75 the prior art does not disclose nor teach an airborne element detection and evacuation system and method that includes a power receptacle interface that can be configured to change states when a particular airborne element is detected with a conduit system coupled to the interior of the structure and to an exhaust apparatus comprising a first and second valve including a booster apparatus within the conduit system being interposed between the interior of the structure and the exhaust apparatus.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

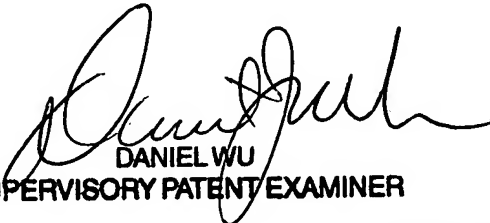
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R. Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRH


DANIEL WU
SUPERVISORY PATENT EXAMINER

11/26/05